

METHODS AND SYSTEMS FOR MOVING FLUID IN A MICROFLUIDIC DEVICE

ABSTRACT

5 The present invention relates to a system and method for moving samples, such as fluid, within a microfluidic system using a plurality of gas actuators for applying pressure at different locations within the microfluidic. The system includes a substrate which forms a fluid network through which fluid flows, and a plurality of gas actuators integral with the substrate. One such gas actuator is coupled to the network at a first location for providing gas pressure to move a microfluidic sample within the network. Another gas
10 actuator is coupled to the network at a second location for providing gas pressure to further move at least a portion of the microfluidic sample within the network. A valve is coupled to the microfluidic network so that, when the valve is closed, it substantially isolates the second gas actuator from the first gas actuator.